MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

Soprema, Inc.
310 Quadral Drive
Wadsworth, OH 44281

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Soprema Modified Bitumen Roofing Systems over Lightweight Concrete Decks.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

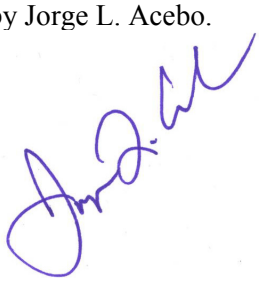
RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA No. 11-0203.01 and consists of pages 1 through 54.
The submitted documentation was reviewed by Jorge L. Acebo.



MIAMI-DADE COUNTY APPROVED

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Modified Bitumen
Material:	SBS
Deck Type:	Lightweight Insulating Concrete
Maximum Design Pressure:	-410 psf.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
Sopra G	39" x 108' (3.5 sq.)	ASTM D4601	Fiberglass reinforced oxidized asphalt base sheet for bonding or mechanically attaching to substrate. **For use as a base/ply sheet only.**
Modified Sopra G	39" x 108' (3.5 sq.)	ASTM D4601	Fiberglass reinforced modified asphalt base sheet for bonding or mechanically attaching to substrate. **For use as a base/ply sheet only.**
Soprabase	39" x 99' (3 sq.)	ASTM D4601	Oxidized asphalt, polyester reinforced, sand-surfaced base sheet. **For use as a base/ply sheet only.**
Soprabase S	39" x 65' (2 sq.)	ASTM D4601	SBS modified bitumen, polyester reinforced, sand-surfaced base sheet. **For use as a base/ply sheet only.**
Soprabase TG	39" x 65' (2 sq.)	ASTM D4601	SBS modified bitumen, polyester reinforced, film-surfaced base sheet. **For use as a base/ply sheet only.**
Sopra IV	36" x 180' (5 sq.)	ASTM D2178 Type IV	Type IV, fiberglass reinforced, smooth surfaced ply sheet used in multi-ply systems and complies with ASTM and UL Standards. Applied in hot asphalt or cold adhesive.
Sopra VI	36" x 180' (5 sq.)	ASTM D2178 Type VI	Type VI, fiberglass reinforced, smooth surfaced plysheet used in multi-ply systems and complies with ASTM and UL Standards. Applied in hot asphalt or cold adhesive.
Sopra 4897	39" x 41'	ASTM D4897	Fiberglass reinforced, smooth surfaced, modified bitumen venting base sheet for mechanically attaching to substrate.
Colvent TG	39" x 49' (1.5 sq.)	ASTM D6163	Fiberglass reinforced, modified bitumen membrane with 1" wide factory applied heat weldable strips on back side.

Product	Dimensions	Test Specification	Product Description
Colvent 180 TG	39” x 33’ (1 sq.)	ASTM D6164	Polyester reinforced, modified bitumen membrane with 1” wide factory applied heat weld strips on back side.
Colvent Flam TG	39” x 49’ (1.5 sq.)	ASTM D6163	Fiberglass reinforced, modified bitumen membrane with 1” wide factory applied heat weld strips on back side and a plastic burn-off film surface.
Colvent Flam 180 TG	39” x 33’ (1 sq.)	ASTM D6164	Polyester reinforced, modified bitumen membrane with 1” wide factory applied heat weld strips on back side and a plastic burn-off film surface.
Elastophene Sanded	39" x 49' (1.5 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Colphene Sanded	39" x 49' (1.5 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene Sanded 3.0	39" x 33' (1sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripped.
Elastophene HS	39” x 66’ (2 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants and sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene PS	39" x 49' (1.5 sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film for heat weld bonding to the top side. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene PS 3.0	39" x 49' (1.5sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film for heat weld bonding to the top side. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene SP 2.2	39" x 49' (1.5 sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).

Product	Dimensions	Test Specification	Product Description
Colphene SP 2.2	39" x 49' (1.5 sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Elastophene SP 3.0	39" x 49' (1 sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Colphene SP 3.0	39" x 49' (1 sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Elastophene Flam	39" x 33' (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane covered on both sides with a plastic burn-off film. Applied by heat welding.
Elastophene Flam 2.2	39" x 49' (1.5 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane covered on both sides with a plastic burn-off film. Applied by heat welding.
Elastophene Flam HS	39” x 33’ (1 sq.)	ASTM D6162	Woven fiberglass/polyester composite reinforced modified bitumen membrane with fire retardants and plastic burn-off film on both sides. Applied by heat welding.
Elastophene HS 62	39” x 33’ (1 sq.)	ASTM D6162	Woven fiberglass/polyester composite reinforced modified bitumen membrane with sanded surface on both sides. Applied in hot asphalt, cold adhesive.
Elastophene 180 Sanded	39" x 49' (1.5 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Colphene 180 Sanded	39" x 49' (1.5 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.

Product	Dimensions	Test Specification	Product Description
Elastophene 180 PS	39" x 49' (1.5 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a sanded bottom and a plastic burn-off film on the top. Applied in hot asphalt, cold adhesive or ribbon stripping.
Colphene 180 PS	39" x 49' (1.5 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a sanded bottom and a plastic burn-off film on the top. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene GR	39" x 33' (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants, sanded on the bottom and mineral granules on the top. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene LS FR GR	39" x 33' (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants, sanded on the bottom and mineral granules on the top. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene FR GR	39" x 33' (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants, sanded on the bottom and mineral granules on the top. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene FR+ GR	39" x 33' (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants, sanded on the bottom and mineral granules on the top. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene Flam GR	39” x 33’ (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants, a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding.
Elastophene Flam LS FR GR	39” x 33’ (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants, a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding.
Elastophene Flam FR GR	39" x 33' (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding.

Product	Dimensions	Test Specification	Product Description
Elastophene Flam FR+ GR	39" x 33' (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding.
Sopralene 180 Sanded	39" x 33' (1 sq.) 39” x 26’ (¾ sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Sopralene 250 Sanded	39" x 33' (1 sq.) 39” x 26’ (¾ sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Sopralene 180 Sanded 2.2	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt or cold adhesive.
Sopralene 180 PS	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the top and sanded on the bottom.
Sopralene 180 PS 2.2	39" x 49' (1.5 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a sanded bottom and a plastic burn-off film on the top. Applied in hot asphalt, cold adhesive or ribbon stripping.
Sopralene 180 SP 3.5	39” x 33’ (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Colphene 180 SP 3.5	39” x 33’ (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene 180 SP 3.0	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top.
Sopralene 250 SP	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top.
Soprafix Base 610	39" x 30’ (1 sq.)	ASTM D6162	Composite reinforced modified bitumen membrane with a film surface. Applied by mechanical attachment.

Product	Dimensions	Test Specification	Product Description
Soprafix Base 611	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a film surface. Applied by mechanical attachment.
Soprafix Base 630	39” x 33’ (1 sq.)	ASTM D6162	Composite reinforced modified membrane with a film surface. Applied by mechanical attachment.
Soprafix [S]	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane. Applied by mechanical attachment.
Soprafix Base 612	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane. Applied by mechanical attachment.
Soprafix [F]	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane. Applied by mechanical attachment.
Soprafix Base 613	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane. Applied by mechanical attachment.
Soprafix [X]	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane. Applied by mechanical attachment.
Soprafix Base 614	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane. Applied by mechanical attachment.
Soprafix	39” x 33’ (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a 4-inch or 5-inch wide side lap with a plastic burn-off film on the bottom and sanded on the top. Applied by mechanical attachment. Lap heat welded or sealed with an approved cold adhesive.
Soprafix Base 622	39” x 33’ (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a 4-inch or 5-inch wide side lap with a plastic burn-off film on the bottom and sanded on the top. Applied by mechanical attachment. Lap heat welded or sealed with an approved cold adhesive.
Soprafix-e	39” x 33’ (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a 5-inch wide side lap with a self-adhering compound and release film and sanded on the bottom and top surfaces. Applied by mechanical attachment. Lap self-adhered or sealed with approved cold adhesive.

Product	Dimensions	Test Specification	Product Description
Soprafix Base 641	39” x 33’ (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a 5-inch wide side lap with a self-adhering compound and release film and sanded on the bottom and top surfaces. Applied by mechanical attachment. Lap self-adhered or sealed with approved cold adhesive.
Soprafix Cap FR-651	39” x 33’ (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants, a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding.
Sopralene Flam 180	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced SBS modified bitumen membrane, both sides covered with a plastic burn-off film. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Colphene Flam 180	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced SBS modified bitumen membrane, both sides covered with a plastic burn-off film. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene Flam 250	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced SBS modified bitumen membrane, both sides covered with a plastic burn-off film. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene 180 FR GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a sanded bottom and a mineral granules top. Applied in hot asphalt, cold applied adhesive or ribbon stripping (after removal of plastic burn-off film).
Colphene 180 FR GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a sanded bottom and a mineral granules top. Applied in hot asphalt, cold applied adhesive or ribbon stripping (after removal of plastic burn-off film).
Sopralene 180 FR+ GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a sanded bottom and a mineral granules top. Applied in hot asphalt, cold applied adhesive or ribbon stripping (after removal of plastic burn-off film).

Product	Dimensions	Test Specification	Product Description
Sopralene 180 Ultra FR GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a sanded bottom and a mineral granules top. Applied in hot asphalt, cold applied adhesive or ribbon stripping (after removal of plastic burn-off film).
Sopralene 250 FR GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a sanded bottom and a mineral granules top. Applied in hot asphalt, cold applied adhesive or ribbon stripping (after removal of plastic burn-off film).
Colphene 250 FR GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a sanded bottom and a mineral granules top. Applied in hot asphalt, cold applied adhesive or ribbon stripping (after removal of plastic burn-off film).
Sopralene 250 Ultra FR GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a sanded bottom and a mineral granules top. Applied in hot asphalt, cold applied adhesive or ribbon stripping (after removal of plastic burn-off film).
Sopralene 250 FR+ GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a sanded bottom and a mineral granules top. Applied in hot asphalt, cold applied adhesive or ribbon stripping (after removal of plastic burn-off film).
Sopralene Flam 180 GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Colphene Flam 180 GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).

Product	Dimensions	Test Specification	Product Description
Sopralene Flam 180 GR 3.5	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene Flam 180 FR GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Colphene Flam 180 FR GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene Flam 180 FR GR 3.5	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene Flam 180 Ultra FR GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene Flam 250 FR GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Colphene Flam 250 FR GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).

Product	Dimensions	Test Specification	Product Description
Sopralene Flam 250 Ultra FR GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene Flam 180 FR+ GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene Flam 250 FR+ GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene Flam Antirock	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding.
Sopralast 50 TV Alu	various	ASTM D6298	Fiberglass reinforced modified bitumen sheeting faced with aluminum foil. Applied by heat welding of ribbon stripping (after removal of plastic burn-off film).
Sopralast 50 TV Alu Sanded	various	ASTM D6298	Fiberglass reinforced modified bitumen sheeting sanded on the bottom and faced with aluminum foil. Applied in hot asphalt, cold adhesive or ribbon stripping.
Soprastar Flam	39” x 33’ (1 sq.)	ASTM D6162	Polyester reinforced SBS modified bitumen membrane with a plastic burn-off film on the bottom side and a reflective white top surface. Applied by heat welding.
Soprastar Sanded	39” x 33’ (1 sq.)	ASTM D6162	Stabilized polyester mat reinforced SBS modified bitumen membrane with a sanded bottom side and a reflective white top surface. Applied by hot asphalt or cold adhesive.

Product	Dimensions	Test Specification	Product Description
Soprafix Cap FR-651	39” x 33’ (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants and a plastic burn-off film on the bottom and mineral granules on the top. Applied in cold adhesive or by heat welding.
UNILAY	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants and surfaced with mineral granules. Applied by mechanical attachment, heat welding or ribbon stripping (after removal of plastic burn-off film).
Elastocol 500	various	ASTM D41	Asphalt primers.
Elastocol Stick	various	ASTM D41	Asphalt primers.
Elastocol Stick Zero	various	ASTM D41	Asphalt primers.
ALSAN Flashing™	1.25 gallon pail or 3.75 gallon pail	Proprietary	One part polyurethane/bitumen resin, moisture cure compound.
ALSAN Polyfleece	4”, 8” or 39” wide by 50’ long	Proprietary	Non-woven polyester reinforcement used in the ALSAN Flashing system.
COLPLY Flashing Cement	5 gallon pail	Proprietary	Elastomeric bitumen based mastic compound.
Soprawalk	39” x 26’ (3/4 sq.)	Proprietary	Non-woven polyester reinforced modified bitumen membrane with a sanded bottom and mineral granules on the top. Applied by hot asphalt, cold adhesive or ribbon stripping.
FM Adhesive	5 gallon pail, 55 gallon drum or 350 gallon tote	Proprietary	Plastomeric bitumen based cold adhesive.
FM Adhesive (VOC)	5 gallon pail, 55 gallon drum or 350 gallon tote	Proprietary	Elastomeric bitumen based cold adhesive.
COLPLY Adhesive	5 gallon pail or 55 gallon drum	Proprietary	Polymer modified cold process membrane adhesive.
COLPLY Modified Adhesive	5 gallon pail, 55 gallon drum or 350 gallon tote	Proprietary	Elastomeric bitumen based cold adhesive.
COLPLY EF Adhesive	5 gallon pail	Proprietary	Solvent free, polymeric adhesive.
Soprastar Adhesive	5 gallon pail or 55 gallon drum	Proprietary	SBS modified bitumen based cold adhesive.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
SECUROCK Gypsum-Fiber Roof Board	Gypsum board	USG Corp.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Tri-Fix Fastening System	Fastening system for base sheet attachment to lightweight concrete, gypsum or cementitious wood fiber decks.	3" diameter plate with various length fasteners	Soprema, Inc.
2.	Soprema #12, #14 & #15 Fasteners	Fasteners for membrane or insulation attachment to wood, steel or concrete decks.	Various	Soprema, Inc.
3.	Dekfast 12, 14 & 15 HS	Insulation fastener	Various	SFS Intec, Inc.
4.	Twin Loc-Nails	Base ply fastening systems for lightweight concrete, gypsum or cementitious wood fiber decks	Various	Altenloh, Brinck & Co. U.S., Inc.
5.	FM-90	Base ply fastening systems for lightweight concrete decks		Altenloh, Brinck & Co. U.S., Inc.
6.	CR Assembled Base Sheet Fastener (1.2") or (1.7")	Base ply fastening assembly		OMG, Inc.
7.	Twin Loc-nails (no plate) Base Sheet Fastener with Straight Line Batten Bar	Batten bar		Altenloh, Brinck & Co. U.S., Inc.
8.	Polymer Batten Strip	Modified polymer batten bar		OMG, Inc.
9.	OMG Heavy Duty	Insulation fastener	Various	OMG, Inc.
10.	Dekfast Galvalume Steel 3" Round	Galvalume AZ50 steel plate	3" round	SFS Intec, Inc.
11.	Dekfast Coiled Batten Strip	Batten bar		SFS Intec, Inc.
12.	Soprema 3" Round Insulation Plate	Stress plate	3" diameter	Soprema, Inc.
13.	Soprafix 2-3/8" SB Stress Plate	Stress plate	2-$^{3}/_{8}$" diameter	Soprema, Inc.
14.	Soprafix MBB-R	Metal Batten Bar		Soprema, Inc.
15.	Soprema #14 MP, #15 HD Fastener	Insulation and membrane fasteners		Soprema, Inc.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
16.	Trufast 3" Metal Insulation Plate	Galvalume steel plate	3" round	Altenloh, Brinck & Co. U.S., Inc.
17.	Trufast #14 HD Fastener	Insulation fastener fro wood, steel and concrete	Various	Altenloh, Brinck & Co. U.S., Inc.
18.	Dekfast Galvalume Steel Round 2-3/8" 20 ga. Barbed plates	Galvalume AZ55 steel barbed plate	2.37" Round	SFS Intec, Inc.
19.	Dekfast Galvalume Steel Hex	Galvalume steel plate	2 $^{7}/_{8}$" x 3 ¼"	SFS Intec, Inc.
20.	OMG XHD	Insulation fastener	Various	OMG, Inc.
21.	OMG 3" Galvalume Steel Plate	Galvalume stress plate	3" round	OMG, Inc.
22.	Soprema 3" Metal Insulation Plate	Stress plate	3" diameter	Soprema, Inc.
23.	Soprema 1.7 in. Base Sheet Fastener	Base ply fastening systems for lightweight concrete decks		Soprema, Inc.
24.	Soprema Twin Loc-Nail	Base ply fastening systems for lightweight concrete, gypsum or cementitious wood fiber decks		Soprema, Inc.

APPROVED SURFACING/COATING OPTIONS:

TABLE 4

Chosen components must be applied according to manufacturer's application instructions. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

System Number	Manufacturer	Application
1.	Generic	Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.
2.	Soprema, Inc.	Gravel applied at 400 lbs./sq., adhered with FM Adhesive, FM Adhesive (VOC), COLPLY EF Adhesive, COLPLY Adhesive, COLPLY Modified Adhesive or Soprastar Adhesive at 4 gal./sq.
3.	Karnak Corporation	Karnak #97 Fibered Aluminum Roof Coating applied at an application rate of 1.5 gal./sq.
4.	Soprema, Inc.	Cural Aluminizer applied at an application rate of 2 gal./sq.
5.	Thermo Manufacturing Systems, LLC	Super Prep Roof Coating applied in two coats at an application rate of 1.5 gal./sq./coat.
6.	Quest Construction Products LLC dba United Coatings	Roof Mate Coating, applied in one base coat at a rate of 1.5 gal./sq., and one finish coat at a rate of 1.5 gal./sq.
7.	Insulating Coatings Corporation	Astec 2000 Finish Coat applied in two base coats at a rate of 0.75 gal./sq./coat and two finish coats at a rate of 0.75 gal./sq./coat.
8.	Henry Company	HE280DC White Elastomeric Roof Coating applied in two coats at an application rate of 1 gal./sq./coat.
9.	National Coating Corp.	Acryshield® A500 applied in two coats at an application rate of 1 gal./sq./coat.
10.	Soprema, Inc.	R-Nova Roof Coating
11.	Generic	Semi-ceramic coated colored granules.

EVIDENCE SUBMITTED:

Test Agency/Identifier	Name	Report	Date
Atlantic & Caribbean Roof Consulting	ACRC 03-008	TAS 114	07/11/03
Underwriters Laboratories	R11436	UL 790	06/18/13
Factory Mutual Research	0PA2.AM	FM 4470	11/29/89
Corporation	2P2A7.AM	FM 4470	11/29/89
	1W8A1.AM	FM 4470	07/15/93
	1Z3A6.AM	FM 4470	04/27/95
	152A1.AM	FM 4470	11/28/84
	2D0A0.AM	FM 4470	08/15/97
	2B8A4.AM	FM 4470	07/02/97
	3001334	FM 4470	01/25/00
	3002351	FM 4470	02/28/03
	3014614	FM 4470	02/27/06
	3023749	FM 4470	09/28/06
	3029098	FM 4470	10/25/07
	3032109	FM 4470	07/21/08
	3045101	FM 4470	11/05/12
	3017614	FM 4470	02/27/06
	3022038	FM 4470	04/05/06
	3025185	FM 4470	05/22/07
	3047439	FM 4470	07/22/13
	3047351	FM 4470	10/09/14
	3044801	FM 4470	02/27/12
	3024594	FM 4470	05/19/06
	3025185	FM 4470	05/22/07
	3045734	FM 4470	04/04/12
Dynatech Engineering Corp.	10.94.27	TAS 114	10/27/94
	2491-04.95	TAS 114	01/04/95
Exterior Research & Design, LLC.	2003.02.97-1	TAS 114	02/15/97
	2003-2.04.97-1	TAS 114	04/15/97
	2002.07.97-1	TAS 114	08/15/97
	2716.05.98-1	TAS 114	05/11/98
	2109.08.02	TAS 114	08/06/02
	2766.12.03	TAS 114	12/01/03
	2760.12.04-R1	TAS 114	12/23/04
Trinity|ERD	S12370.03.09-1	ASTM D6164	03/06/09
	S12370.03.09-2	ASTM D6164	03/06/09
	S12370.03.09-3	ASTM D6162	03/06/09
	S11440.06.10	ASTM D4798/TAS 110	06/01/10
	S32840.06.10-R1	TAS 117 (B)	12/11/14
	S11440.01.11-R1	ASTM D6164	06/07/12
	S11440.11.10-4	ASTM D2178	11/17/10
	S11440.11.10-3-R1	ASTM D4601	01/30/13
	S11440.12.10-1-R1	ASTM D6163	06/07/12
	S32700.12.10-R2	ASTM D6162	07/07/14
	S35860.12.11-1-R1	ASTM D2178	12/12/14
	S35860.12.11-2	ASTM D4601	12/12/11
	S35860.05.12-1-R2	ASTM D6163	03/14/13

EVIDENCE SUBMITTED: (CONTINUED)

Test Agency/Identifier	Name	Report	Date
Trinity | ERD	S35860.05.12-2-R3	ASTM D6164	08/28/14
	S43400.08.14-5	ASTM D6163	08/26/14
	S43400.08.14-6	ASTM D6164	08/26/14
	S43400.08.14-7-R1	ASTM D6164	11/20/14
	S43400.09.14-9	ASTM D6164	09/02/14
	S43400.09.14-10	ASTM D6298	09/08/14
	S45010.02.14	ASTM D6506	02/07/14
	S43400.08.14-4-R1	ASTM D6163	10/24/14
	S44110.09.14-3	ASTM D6163	09/08/14
	S44110.09.14-7C	ASTM D6164	09/02/14
	S44220.09.14-1	ASTM D6162	09/08/14
	S44220.09.14-7A	ASTM D4601	09/08/14
	S11440.11.10-3-R2	ASTM D4601/TAS 117(B)	08/26/14
	S43210.11.14	ASTM D1876	11/20/14
	S35860.05.12-3	ASTM D6164	05/08/12
	S35860.09.12-R2	ASTM D6163	12/12/14
	M45560.10.13-1-R2	ASTM D4897/TAS 117	12/11/14
	S39970.07.12-2	ASTM D6164	07/12/12
	S39970.07.12-R1	ASTM D6162	12/12/14
PRI Construction Materials	SOP-049-02-01	ASTM D1644/D2196	05/31/12
Technologies, LLC	SOP-043-02-01	ASTM D4601	02/27/12
	SOP-042-02-01	ASTM D4601	02/27/12
	SOP-041-02-01	ASTM D2178	02/27/12
	SOP-040-02-01	ASTM D2178	02/27/12
	SOP-010-02-01.03	TAS-138	07/26/11
	SOP-012-02-01	TAS 114-J	08/29/11
	SOP-012-02-02	TAS 114-J	05/08/12
	SOP-050-02-01	ASTM D3019	07/12/12
	SOP-056-02-01	Physical Properties	09/12/12
Certified Testing Laboratories	CTLA 101R	TAS 114-J	09/23/08
	CTLA 101R-A	TAS 114-J	09/23/08

APPROVED ASSEMBLIES:

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Elastizell Range II Cellular Lightweight Insulating Concrete, Min. 200 psi, wet cast density 36 pcf, min. 2½" thick top coat. Over an optional minimum 2" thick EPS Holey Board.
Or
Mearlcrete Lightweight Insulting Concrete, Min. 200 psi, wet cast density 40 pcf, min. 2" thick top coat. Over an optional minimum 1" thick EPS Holey Board.

System Type E(1): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: Minimum 22 ga., Grade 33, type BW36-22 slotted steel decking attached to supports spaced 5' o.c. maximum using 5/8" puddle welds (every bottom flute). Steel deck side laps are attached with three Traxx 1 #10 evenly spaced between supports or structural concrete deck.

Primer: (Optional) Elastocol 500, Elastocol Stick, Elastocol Stick Zero applied at a rate of 1 gal./sq., to top surface of any base or ply sheet prior to application of next layer.

Base Sheet: One layer of Sopra G, Modified Sopra G, Sopra 4897, Soprabase*, Soprabase S* fastened to the deck as described. Attach base sheet using FM-90, Soprema 1.7 in. Base Sheet Fastener or OMG CR Assembled Base Sheet Fasteners (1.7") spaced 7" o.c. in a 4" lap and 7" o.c. in two staggered rows in the center of the sheet.
*require asphalt applied or cold applied ply sheets.

Ply Sheet: Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250* or Sopralene 250 SP, torch-applied.

Or

Elastophene Sanded, Colphene Sanded, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Elastophene 180 PS*, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, or one to three plies of Sopra IV or Sopra VI ply sheet, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY EF Adhesive, COLPLY Adhesive, COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square to sand surfaced base membrane.
*Requires torch-applied cap membrane.

Membrane:	Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Soprastar Flam, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 GR 3.5, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. Or Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Soprastar Sanded, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 180 Ultra FR GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralene 250 Ultra FR GR, Sopralast 50 TV Alu Sanded adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY EF Adhesive, COLPLY Adhesive, COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square to sand surfaced ply membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	-45 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Mearlcrete Lightweight Concrete, min. 225 psi. cast over deck with 1" EPS board embedded in 1/8" slurry. Followed by 3" top coat of Mearlcrete Lightweight Concrete.

System Type E(2): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: Minimum 22 ga. type B, Grade 33 vented steel decking washed with a weak acid solution attached to supports spaced 6' o.c. maximum using 5/8" puddle welds spaced 6" o.c. Steel deck side laps are attached with #1/4-14 x 7/8", DP1, HWH self-drilling screws with ¼" washers evenly spaced 12" o.c. or structural concrete deck.

Base Sheet: One layer of Sopra G, Modified Sopra G, Soprabase*, Soprabase S*, Sopra 4897 fastened to the deck as described below:
*Requires asphalt applied or cold applied ply sheets.

Fastening: Attach base sheet using FM-90, Soprema 1.7 in. Base Sheet Fastener or OMG CR Base Ply Fasteners (1.7") spaced 7" o.c. in a 4" lap and 7" o.c. in two staggered rows in the field of the sheet.

Ply Sheet: Elastophene Sanded, Colphene Sanded, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 PS*, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 PS*, Sopralene 180 Sanded, Sopralene 250 Sanded or one or more plies of Sopra IV or Sopra VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY Adhesive, COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square to sand surfaced base membrane.
*Requires torch-applied cap membrane.

Or

Elastophene Flam, Elastophene Flam 2.2, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene Flam 250, torch-applied.

Membrane: Elastophene Flam GR, Elastophene Flam LS FR GR, Elastophene Flam FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 GR 3.5, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Soprastar Flam, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied with minimum 3" wide lap.

Or

	Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Soprastar Sanded, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 Ultra FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 Ultra FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY Adhesive, COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square to sand surfaced ply membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	-45 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Mearlcrete Lightweight Insulting Concrete,, min. 200 psi., wet cast density 40 pcf, with 1.5" EPS board embedded in 1/8" slurry. Followed by, wet cast density 40 pcf, min. 2" thick top coat.

System Type E(3): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: Minimum 22 ga., Grade 33, type BV steel decking attached to support spaced at 5' o.c. maximum using 3/8" puddle welds with washer (every corrugation). Steel deck side laps are secured with two Traxx 1 #10 evenly spaced between supports or structural concrete deck.

Base Sheet: One layer of Sopra G, Modified Sopra G, Soprabase*, Soprabase S*, Sopra 4897 fastened to the deck as described below:

*Requires asphalt applied or cold applied ply sheets.

Fastening: Attach anchor sheet using OMG CR Assembled Base Sheet Fasteners, FM-90 or Soprema 1.7 in. Base Sheet Fastener spaced 7" o.c. in a 4" lap and 7" o.c. in two staggered rows in the center of the sheet.

Ply Sheet: Elastophene Sanded, Colphene Sanded, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 PS*, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 PS*, Sopralene 180 Sanded, Sopralene 250 Sanded or one or more plies of Sopra IV or Sopra VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced base membrane.
Or
Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 250* or Sopralene 250 SP, torch-applied.
*Requires torch-applied cap membrane.

Membrane: Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam FR+GR, Elastophene Flam LS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 GR 3.5, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.

Or

Elastophene FR GR, Elastophene LS FR GR, Elastophene GR, Soprastar Flam, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 180 Ultra FR GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralene 250 Ultra FR GR, Sopralast 50 TV Alu Sanded adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced ply membrane.

Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	-52.5 psf. (See General Limitation #7.)

Membrane Type:	SBS
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Elastizell Range II Cellular Lightweight Insulating Concrete, Min. 200 psi, wet cast density 36 pcf, min. 2½" thick top coat. Over an optional minimum 2" thick EPS Holey Board. Or Mearlcrete Lightweight Insulting Concrete, Min. 200 psi, wet cast density 40 pcf, min. 2" thick top coat. Over an optional minimum 1" thick EPS Holey Board.
System Type E(4):	Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck:	Minimum 22 ga., Grade 33, type BW36-22 slotted steel decking attached to supports spaced 5' o.c. maximum using 5/8" puddle welds (every bottom flute). Steel deck side laps are attached with three Traxx 1 #10 evenly spaced between supports or structural concrete deck.
Primer: (Optional)	Elastocol 500, Elastocol Stick, Elastocol Stick Zero applied at a rate of 1 gal./sq., to top surface of any base or ply sheet prior to application of next layer
Base Sheet:	One layer of Soprafix [S]*, Soprafix Base 612*, Soprafix [F]*, Soprafix Base 613*, Soprafix [X]*, Soprafix Base 614*, Soprafix, Soprafix Base 622, Soprafix-e or Soprafix Base 641 fastened to the deck as described below. *Requires torch-applied ply membrane.
Fastening #1:	Attach base sheet using Tri-Fix Fastening System spaced 9" o.c. in a 5" lap. The side lap fastener row is encapsulated in the torch-applied lap. ***(Maximum Design Pressure –45 psf. See General Limitation #7.)***
Fastening #2:	Attach base sheet using Tri-Fix Fastening System spaced 8" o.c. in a 5" lap and 8" o.c. in one center row. The side lap fastener row is encapsulated in the torch-applied lap and the center row is stripped-in with a min. 6" wide strip of torch-applied membrane. ***(Maximum Design Pressure –67.5 psf. See General Limitation #7.)***
Ply Sheet: (Optional)	Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied. Or Elastophene Sanded, Colphene Sanded, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 PS*, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 PS*, Sopralene 180 Sanded, Sopralene 250 Sanded or one to three plies of Sopra IV or Sopra VI ply sheet, adhered in FM Adhesive, FM Adhesive (VOC), COLPLY EF Adhesive, COLPLY Adhesive,COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square to sand surfaced base membrane. *Requires torch-applied cap membrane.

Membrane:	Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Soprastar Flam, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 GR 3.5, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, Soprafix Cap FR-651, torch-applied. Or Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Soprastar Sanded, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 180 Ultra FR GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralene 250 Ultra FR GR, Sopralast 50 TV Alu Sanded adhered in FM Adhesive, FM Adhesive (VOC), COLPLY EF Adhesive, COLPLY Adhesive, COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square to sand surfaced ply membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Mearlcrete Lightweight Insulating Concrete, min. 200 psi, wet cast density 40 pcf, min. 2" thick top coat. Over an optional minimum 1" thick EPS Holey Board.

System Type E(5): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: Minimum 22 ga., Grade 33, type BV steel decking attached to support spaced at 5' o.c. maximum using 3/8" puddle welds with washer (every bottom flute). Steel deck side laps are attached three Traxx 1 #10 evenly spaced between supports or structural concrete deck.

Base Sheet: One layer of Soprafix, Soprafix Base 622, Soprafix-e, Soprafix Base 641, Soprafix [S]*, Soprafix Base 612*, Soprafix [F]*, Soprafix Base 613*, Soprafix [X]* or Soprafix Base 622* fastened to the deck as described below:
*Requires torch-applied cap membrane.

Fastening #1: Attach base sheet using Tri-Fix Fasteners spaced 9" o.c. in a 5" lap. The side lap fastener row is encapsulated in the torch-applied lap.

(Maximum Design Pressure –45 psf. See General Limitation #7.)

Fastening #2: Attach base sheet using Tri-Fix Fasteners spaced 8" o.c. in a 5" lap and 8" o.c. in one center rows. The side lap fastener row is encapsulated in the torch-applied lap and the center row is stripped-in with an 8" wide strip of torch applied membrane.

(Maximum Design Pressure –67.5 psf. See General Limitation #7.)

Ply Sheet: (Optional) Elastophene Flam*, Elastophene Flam 2.2*, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.
*Requires torch-applied cap membrane.

Membrane: Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam FR+GR, Elastophene Flam LS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 GR 3.5, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, Soprafix Cap FR-651, torch-applied.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.

Maximum Design Pressure: See Fastening Requirements above

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Elastizell Range II Cellular Lightweight Insulating Concrete with Vermiculite Additive, Min. 200 psi, wet cast density 36 pcf, min. 2½" thick top coat. Over an optional minimum 2" thick EPS Holey Board

System Type E(6): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: Minimum 22 ga., Grade 33, type BW36-22 slotted steel decking attached to supports spaced 5' o.c. maximum using 5/8" puddle welds (every bottom flute). Steel deck side laps are attached with three Traxx 1 #10 evenly spaced between supports or structural concrete deck.

Primer: (Optional) Elastocol 500, Elastocol Stick, Elastocol Stick Zero applied at a rate of 1 gal./sq., to top surface of any base or ply sheet prior to application of next layer.

Base Sheet: Sopra G, Modified Sopra G, Sopra 4897, Soprabase*, Soprabase S* fastened to the deck as described. Attach base sheet using FM-90, Soprema 1.7 in. Base Sheet Fastener or OMG CR Assembled Base Sheet Fasteners (1.7") spaced 9" o.c. in a 4" lap and 9" o.c. in two staggered rows in the center of the sheet.
*Requires asphalt applied or cold applied ply sheets.

Ply Sheet: Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250* or Sopralene 250 SP, torch-applied.Or

Elastophene Sanded, Colphene Sanded, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Elastophene 180 PS*, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, or one to three plies of Sopra IV or Sopra VI ply sheet, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY EF Adhesive, COLPLY Adhesive, COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square to sand surfaced base membrane.
*Requires torch-applied cap membrane.

Membrane:	Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Soprastar Flam, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 GR 3.5, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. Or Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Soprastar Sanded, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 Ultra FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralene 250 Ultra FR GR, Sopralast 50 TV Alu Sanded adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY EF Adhesive, COLPLY Adhesive, COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square to sand surfaced ply membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	-52.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Aggregate Lightweight Concrete, min. 360 psi., wet cast density of 65 pcf. LWC shall consist of a minimum 2" EPS board with minimum 3" top coat. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 88 lbf. when tested with Twin Loc-Nails in accordance with TAS 105.

System Type E(7): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: 18-22 ga. Type B, Grade 33, vented steel deck fastened 6" o.c. with Traxx/5 fasteners to supports spaced 5 ft o.c. Deck side laps fastened with Traxx/1 fasteners spaced at 20" o.c.

Base Sheet: Sopra G, Soprabase*, Soprabase S*, Soprabase TG or Sopra 4897 fastened to the deck as described. Attach base sheet using Twin Loc-Nails spaced 9" o.c. in a 4" lap and 9" o.c. in two staggered rows in the center of the sheet.
*Requires asphalt applied or cold applied ply sheets.

Ply Sheet: (Optional) Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.

Or

Elastophene Sanded, Colphene Sanded, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 PS*, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 PS*, Sopralene 180 Sanded, Sopralene 250 Sanded or one or more plies of Sopra IV or Sopra VI ply sheets, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced base membrane.
*Requires torch-applied cap membrane.

Membrane: Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam FR+GR, Elastophene Flam LS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 GR 3.5, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.

Or

Elastophene FR GR, Elastophene LS FR GR, Elastophene GR, Soprastar Sanded, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 180 Ultra FR GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralene 250 Ultra FR GR, Sopralast 50 TV Alu Sanded adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced base or ply membrane.

Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	-60 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Celcore HS Cellular Concrete; minimum wet cast density of 38 lbs./ft^3, 300 psi, over 18-22 ga steel decking or structural concrete deck.

System Type E(8): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: 18-22 ga., Grade 33, Type BV steel decking attached to supports spaced maximum 6' o.c. using 0.5" puddle welds and washers 6" o.c. Steel deck side laps are attached with three Traxx/1 fasteners spaced maximum 12" o.c. or structural concrete deck.

LWC Deck: Celcore HS Cellular Concrete with a minimum wet cast density of 38 lbs./ft^3, minimum 2" thick top coat. Over a minimum 1" thick EPS Holey Board.

LWC Deck Preparation: Celcore PVA Curing Compound spray applied to lightweight concrete at a rate of 0.33 gal./sq.

Base Sheet: Soprafix, Soprafix Base 622, Soprafix [S], Soprafix Base 612, Soprafix [F], Soprafix Base 613, Soprafix [X], Soprafix Base 614, Soprafix-e or Soprafix Base 641 mechanically attached through lightweight concrete to steel decking with Dekfast Galvalume Steel Round 2-3/8" 20-Ga Barbed Plates and Dekfast 15 HS fasteners or Soprema #15 Fasteners with Soprafix 2-3/8" –SB Stress Plates space maximum 12" o.c. through minimum 5" wide laps and maximum 12" o.c. in one central row in the field. A minimum 6" wide strip of Sopralene Flam 180 or Colphene Flam 180 is torch-applied over field fasteners.

Ply Sheet: (Optional) Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250, Sopralene 250 SP, torch-applied.

Membrane: Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 GR 3.5, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, Soprafix Cap FR-651, torch-applied with minimum 3" wide laps.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.

Maximum Design Pressure: -60 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Celcore MF Cellular Concrete; min. wet cast density of 38 lbs./ft^3, min. 300 psi, over 18-22 ga steel decking or structural concrete.

System Type E(9): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: Structural concrete or 18-22 ga., Grade 33, Type B steel deck installed and welded to minimum 0.25 in. thick steel structural supports spaced maximum 5' o.c. using 3/8" diameter weld washers 6" o.c. at each bearing. The deck side laps are fastened at 30" o.c. using Traxx/1 fasteners.

Thermal Barrier: (Optional) (*With steel deck only*) Min. 0.625-inch SECUROCK Gypsum-Fiber Roof Board mechanically attached with OMG Heavy-Duty fasteners and OMG 3" Galvalume Steel Plates at 1.6 ft^2.

Vapor Barrier: (Optional) Elastophene SP 2.2, Elastophene SP 3.0, Colphene SP 2.2, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied over substrate primed with Elastocol 500, Elastocol Stick or ASTM D41 primer.

LWC Deck: Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture with a minimum wet cast density of 38 lbs./ft^3, filling the corrugation with a minimum depth of 1/8". The Celcore HS admixture was added to the mixture during the mixing process at a rate of 3.4 fl. oz. per 100 lbs. of cement. Minimum 1" thick Holey Boards are then immediately placed in a brick-like pattern into the wet concrete and allowed to set overnight. The following day, a minimum 2" thick topping layer of Celcore MF Cellular Concrete with Celocre HS Rheology Modifying Admixture is placed atop the EPS at a wet cast density of 38 lbs./ft^3. After an overnight set, Celcore PVA Curing Compound is spray applied to the lightweight concrete at a rate of 0.33 gal./sq. and allowed to dry for 48 hours.

Base Sheet: Elastophene 180 Sanded, Colphene 180 Sanded, Elastophene Sanded, Colphene Sanded, Sopra G, Modified Sopra G, Sopra IV, Sopra VI, Soprafix, Soprafix Base 622, Sopra 4897, Soprabase*, Soprabase S* mechanically attached with FM-90 or Soprema 1.7 in. Base Sheet Fastener spaced 9" o.c. at the 4" laps and 12" o.c. in two equally spaced, staggered rows.
*Requires asphalt applied or cold applied ply sheets.

Ply Sheet: (Optional) Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 250* or Sopralene 250 SP, torch-applied with minimum 3" wide lap.

Or

Elastophene PS*, Elastophene PS 3.0*, Elastophene Sanded, Colphene Sanded, Elastophene Sanded 3.0, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 250 Sanded, Sopralene 180 PS*, Elastophene HS adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY EF Adhesive, COLPLY Adhesive, COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square.

*Requires torch-applied cap membrane.

Membrane: Elastophene Flam GR, Elastophene Flam LS FR GR, Elastophene Flam FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 GR 3.5, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Soprastar Flam, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, Soprafix Cap FR-651, torch-applied with minimum 3” wide lap.

Or

Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Soprastar Sanded, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 Ultra FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 Ultra FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY EF Adhesive, COLPLY Adhesive, COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square to sand surfaced ply membrane.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Celcore MF Cellular Concrete; minimum wet cast density of 41.5 lbs./ft^3, minimum 300 psi, over 18-22 ga steel decking

System Type E(10): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: 18-22 ga., Grade 33, vented or non-vented galvanized steel deck installed and welded to minimum 0.25 in. thick steel structural supports spaced maximum 6' o.c. using 3/8" diameter weld washers 6" o.c. at each bearing. The deck side laps are fastened at 24" o.c. (three evenly spaced fasteners between supports) using Teks 1 or Traxx/1 fasteners between supports. or structural concrete deck.

LWC Deck: Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture with a minimum wet cast density of 41.5 lbs./ft^3, filling the corrugation with a minimum depth of 1/8". The Celcore HS admixture was added to the mixture during the mixing process at a rate of 3.4 fl. oz. per 100 lbs. of cement. Minimum 1" thick Insulfoam EPS Holey Boards are then immediately placed in a brick-like pattern into the wet concrete and allowed to set overnight. The following day, a minimum 2" thick topping layer of Celcore MF Cellular Concrete with Celocre HS Rheology Modifying Admixture is placed atop the EPS at a wet cast density of 45.6 lbs./ft^3.

LWC Deck Preparation: After an overnight set, Celcore PVA Curing Compound is spray applied to the lightweight concrete at a rate of 0.33 gal./sq.

Base Sheet: Elastophene 180 Sanded, Colphene 180 Sanded, Elastophene Sanded, Colphene Sanded, Sopra G, Modified Sopra G, Sopra IV, Sopra VI, Soprafix, Soprafix Base 622, Sopra 4897, Soprabase*, Soprabase S* mechanically attached with FM-90 or Soprema 1.7 in. Base Sheet Fastener spaced 7" o.c. at the 3" laps and 7" o.c. in two equally spaced, staggered rows.
*Requires asphalt applied or cold applied ply sheets.

Ply Sheet: Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 250 or Sopralene 250 SP, torch-applied with minimum 3" wide lap.

Or

Elastophene PS*, Elastophene PS 3.0*, Elastophene Sanded, Colphene Sanded, Elastophene Sanded 3.0, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 250 Sanded, Sopralene 180 PS*, Elastophene HS adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY EF Adhesive, COLPLY Adhesive, COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square.

*Requires torch-applied cap membrane.

Membrane:	Elastophene Flam GR, Elastophene Flam LS FR GR, Elastophene Flam FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 GR 3.5, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Soprastar Flam, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, Soprafix Cap FR-651, torch-applied with minimum 3" wide lap.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	-60 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Celcore MF Cellular Concrete; minimum wet cast density of 43.5 lbs./ft^3, minimum 300 psi, over 18-22 ga steel decking

System Type E(11): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: 18-22 ga., Grade 33, vented or non-vented or galvanized steel deck installed and welded to minimum 0.25 in. thick steel structural supports spaced maximum 6' o.c. using 3/8" diameter weld washers 6" o.c. at each bearing. The deck side laps are fastened at 24" o.c. (three evenly spaced fasteners between supports) using Teks 1 or Traxx/1 fasteners between supports. Or structural concrete deck.

Thermal Barrier: (*With steel deck only*) One layer of 5/8" SECUROCK Gypsum-Fiber Roof Board mechanically attached with OMG 3" Galvalume Steel Plates and OMG Heavy Duty fasteners, Dekfast Galvalume Steel Hex plates or Dekfast Galvalume Steel 3" Round plates and Dekfast 14 fasteners or Trufast 3" Metal Insulation Plates and Trufast #14 HD Fasteners at a rate of 1.6 ft^2 per fastener.

Vapor Barrier: One layer of Elastophene SP 2.2 or Colphene SP 2.2, torch-applied with minimum 3" wide lap or one layer of Elastophene 180 Sanded, Colphene 180 Sanded, Elastophene Sanded, Colphene Sanded, Sopralene 180 Sanded or Sopralene 250 Sanded, hot asphalt applied.

LWC Deck: Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture with a minimum wet cast density of 43.5 lbs./ft^3, filling the corrugation with a minimum depth of 1/8". The Celcore HS admixture was added to the mixture during the mixing process at a rate of 3.4 fl. oz. per 100 lbs. of cement. Minimum 1" thick Insulfoam EPS Holey Boards are then immediately placed in a brick-like pattern into the wet concrete and allowed to set overnight. The following day, a minimum 2" thick topping layer of Celcore MF Cellular Concrete with Celocre HS Rheology Modifying Admixture is placed atop the EPS at a wet cast density of 45 lbs./ft^3.

LWC Deck Preparation: After an overnight set, Celcore PVA Curing Compound is spray applied to the lightweight concrete at a rate of 0.33 gal./sq.

Base Sheet: Sopra G, Modified Sopra G, Sopra VI, Sopra 4897, Soprabase, Soprabase S mechanically attached with FM-90 or Soprema 1.7 in. Base Sheet Fastener spaced 7" o.c. at the 3" laps and 7" o.c. in two equally spaced, staggered rows.

Ply Sheet (Optional): Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 250*, Sopralene 250 SP, torch-applied with minimum 3" wide lap.

Or

Ply Sheet (Optional): (Continued)	Elastophene PS*, Elastophene PS 3.0*, Elastophene Sanded, Colphene Sanded, Elastophene Sanded 3.0, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 250 Sanded, Sopralene 180 PS*, Elastophene HS adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY EF Adhesive, COLPLY Adhesive, COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square. *Requires torch-applied cap membrane.
Membrane:	Elastophene Flam GR, Elastophene Flam LS FR GR, Elastophene Flam FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 GR 3.5, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Soprastar Flam, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, Soprafix Cap FR-651, torch-applied with minimum 3” wide lap. Or Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Soprastar Sanded, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 Ultra FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 Ultra FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY EF Adhesive, COLPLY Adhesive, COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square to sand surfaced ply membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	-60 psf. (with asphalt applied vapor barriers) (See General Limitation #7) -75 psf. (with torch applied vapor barriers) (See General Limitation #7)

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Aggregate Lightweight Concrete, 360 psi. min. wet cast density of 65 pcf. LWC shall consist of a minimum 2" EPS board with minimum 3" top coat. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 110 lbf when tested with Twin Loc-Nails in accordance with TAS 105.

System Type E(12): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: 18-22 ga. Type B, Grade 33, vented steel deck fastened 6" o.c. with Traxx/5 fasteners to supports spaced 5 ft o.c. Deck side laps fastened with Traxx/1 fasteners spaced at 20" o.c.

Base Sheet: One layer of Soprabase, Soprabase S fastened to the deck as described. Attach base sheet using Twin Loc-Nails or Soprema Twin Loc-Nails spaced 9" o.c. in a 4" lap and 9" o.c. in two staggered rows in the center of the sheet.

Ply Sheet: Elastophene Sanded, Colphene Sanded, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded or one or more plies of Sopra IV or Sopra VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY EF Adhesive, COLPLY Adhesive, COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square.

Membrane: Elastophene FR GR, Elastophene LS FR GR, Elastophene GR, Soprastar Sanded, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 180 Ultra FR GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralene 250 Ultra FR GR, Sopralast 50 TV Alu Sanded adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY EF Adhesive, COLPLY Adhesive, COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.

Maximum Design Pressure: -75 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Celcore MF Cellular Concrete, min. 350 psi.

System Type E(13): Base sheet mechanically fastened to primed substrate.

All General and System Limitations apply.

Structural Deck: Min. 22 ga., Grade 33, vented or non-vented painted or galvanized steel deck attached 6" o.c. with 3/8 in. weld washers to steel supports spaced max 6 ft o.c. Deck side laps are attached with Traxx/1 screws spaced 24" o.c or min. 2,500 structural concrete.

Thermal Barrier: (Optional) (*With steel deck only*) Min. 0.625-inch SECUROCK Gypsum-Fiber Roof Board mechanically fastened with OMG Heavy Duty fasteners, OMG 3" Galvalume Steel Plates, Dekfast Galvalume Steel Hex plates, Dekfast Galvalume Steel 3" Round plates, Dekfast 14 fasteners, Trufast 3" Metal Insulation Plates and Trufast #14 Stainless Steel HD Fasteners, or Soprema 3" Round Insulation Plate and Soprema #14 Fasteners at a rate of 1 per 1.6 ft^2.

Vapor Barrier: (Optional) Elastophene 180 Sanded, Colphene 180 Sanded, Elastophene Sanded, Colphene Sanded, Sopralene 180 Sanded or Sopralene 250 Sanded, hot asphalt applied.

Or

Elastophene SP 2.2, Elastophene SP 3.0, Colphene SP 2.2, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied over substrate primed with Elastocol 500, Elastocol Stick, Elastocol Stick Zero or ASTM D41 primer.

LWC Deck: A 1/8" slurry coat of, min. 350 psi, Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture with min. 1" thick Holy Board and a minimum 2" thick top coat. After setting to support foot traffic, Celcore PVA Curing Compound is applied at a rate of 0.33 gal./square.

Base Sheet: One ply of Sopra G, Modified Sopra G, Sopra VI, Sopra 4897, Soprabase, Soprabase S mechanically attached with FM-90, Soprema 1.7 in. Base Sheet Fastener or OMG CR Base Ply Fasteners (1.7") or spaced 7-inch o.c. at the 3-inch laps and 7-inch o.c. in two equally spaced, staggered center rows.

Ply Sheet: (Optional) Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.0, Sopralene Flam 250* or Sopralene 250 SP, torch-applied.

	Or Elastophene PS*, Elastophene PS 3.0*, Elastophene Sanded, Colphene Sanded, Elastophene Sanded 3.0, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 250 Sanded, Sopralene 180 PS*, Elastophene HS adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY EF Adhesive, COLPLY Adhesive, COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square. *Requires torch-applied cap membrane.
Membrane:	Elastophene Flam GR, Elastophene Flam LS FR GR, Elastophene Flam FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 GR 3.5, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Soprastar Flam, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, Soprafix Cap FR-651, torch-applied with minimum 3” wide lap. Or Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Soprastar Sanded, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 Ultra FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 Ultra FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY EF Adhesive, COLPLY Adhesive, COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square to sand surfaced ply membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	-60 psf. (with asphalt applied vapor barriers) (See General Limitation #7) -75 psf. (with torch applied vapor barriers) (See General Limitation #7.)

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Celcore MF Cellular Concrete; minimum wet cast density of 42 lbs./ft^3, minimum 300 psi, over 18-22 ga steel decking or min. 2,500 structural concrete

System Type E(14): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: 18-22 ga., Grade 33, Type B steel deck secured to the structural supports 6" o.c. with ½" welds and washers spaced maximum 5' o.c. The deck side laps are fastened at 24" o.c. (three evenly spaced fasteners between supports) using Traxx/1 screws between supports or min. 2,500 structural concrete.

Vapor Barrier (Optional): (With concrete deck) UL or FM approved asphaltic vapor retarder may be installed over the deck or the base layer of insulation.

LWC Deck: (Option 1) Celcore MF Cellular Concrete, minimum wet cast density of 42 lbs./ft^3, with Celcore HS Rheology Modifying Admixture applied in a min. 1/8" slury. Minimum 1" thick Holey Boards are then immediately placed into the wet concrete and allowed to set overnight. The following day, a min. 2" thick topping layer of Celcore MF Cellular Concrete with Celocre HS Rheology Modifying Admixture is placed atop the EPS. After an overnight set, Celcore PVA Curing Compound is spray applied to the lightweight concrete at a rate of 300 ft^2/gal.

LWC Deck: (Option 2) (Only with concrete deck) Min. 2" thick Celcore MF Cellular Concrete, minimum wet cast density of 42 lbs./ft^3 After an overnight set, Celcore PVA Curing Compound is spray applied to the lightweight concrete at a rate of 300 ft^2/gal.

Base Sheet: One ply of Sopra G, Modified Sopra G, Soprabase, Soprabase S, Sopra 4897 or Sopra VI mechanically attached with FM-90, Soprema 1.7 in. Base Sheet Fastener or OMG CR Base Ply Fasteners (1.7") or spaced 7" o.c. at the 3" laps and 7" o.c. in two equally spaced, staggered center rows.

Ply Sheet: (Optional) Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 250* or Sopralene 250 SP, torch-applied with minimum 3" wide lap.

Or

Elastophene PS*, Elastophene PS 3.0*, Elastophene Sanded, Colphene Sanded, Elastophene Sanded 3.0, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 250 Sanded, Sopralene 180 PS*, Elastophene HS adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY EF Adhesive, COLPLY Adhesive, COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square.

*Requires torch-applied cap membrane.

Membrane:	Elastophene Flam GR, Elastophene Flam LS FR GR, Elastophene Flam FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 GR 3.5, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Soprastar Flam, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, Soprafix Cap FR-651, torch-applied with minimum 3" wide lap. Or Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Soprastar Sanded, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 Ultra FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 Ultra FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY EF Adhesive, COLPLY Adhesive, COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square to sand surfaced ply membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	-75 psf. (See General Limitation #7)

Membrane Type:	SBS
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Mearlcrete Lightweight Insulting Concrete, wet cast density 40 - 42 pcf, min. 200 psi, with optional 1" EPS board embedded in 1/8" slurry. Min. 2" thick top coat.
System Type E(15):	Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck:	2500 psi, structural concrete deck.
Vapor Barrier: (Optional)	UL or FM approved asphaltic vapor retarder may be installed over the deck.
Base Sheet:	One layer of Soprafix or Soprafix Base 622 fastened to the deck as described below:
Fastening:	Attach base sheet using Tri-Fix Fasteners spaced 8" o.c. in 5" side laps and 8" o.c. in one center row. The side laps are torch-applied and the center row is covered with a 6" wide strip of Soprafix or Soprafix Base 622.
Ply Sheet: (Optional)	Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Soprafix [F], Soprafix Base 613, Soprafix [S], Soprafix Base 612, Soprafix [X] or Soprafix Base 614, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, torch-applied.
Membrane:	Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam FR+ GR Elastophene Flam LS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 GR 3.5, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	-75 psf. (See Limitation #7)

Membrane Type:	SBS
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Celcore MF Cellular Concrete; min. 340 psi, wet cast density of 38-42 lbs/ft^3.
System Type E(16):	Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck:	Structural concrete deck or 18-22 ga., Grade 33, steel deck type B, BV attached to supports spaced maximum 6' o.c. using welds through weld washers at the bottom of each corrugation. The deck panel side laps are fastened 24" o.c. (three evenly spaced fasteners between supports) using ITW-Buildex fasteners between the deck supports.
LWC Deck:	Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture with a min. 340 psi, filling the corrugation with a minimum depth of 1/8". Minimum 1" thick Insulfoam EPS Holey Boards are then immediately placed in a brick-like pattern into the wet concrete and allowed to set overnight. The following day, a minimum 2" thick topping layer of Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture is placed atop the EPS at a wet cast density of 38-42 lbs./ft^3. After an overnight set, Celcore PVA Curing Compound is spray applied to the lightweight concrete at a rate of 0.5 gal./sq.
Base Sheet:	Soprafix [S], Soprafix Base 612, Soprafix [F], Soprafix Base 613, Soprafix [X] or Soprafix Base 614 mechanically attached through LWC into steel decking, perpendicular to the direction of the steel decking with Soprafix MBB-R batten bar placed center within a 3" wide lap. The bars are secured using OMG XHD or Soprema #15 fasteners spaced 12" o.c. with a row in the field of the sheet with Soprafix MBB-R batten bars and OMG XHD Fasteners or Soprema #15 fasteners spaced 12" o.c. Apply a 6" wide strip of Soprafix [S] or Soprafix Base 612 torch-applied over the exposed center row of fasteners.
Ply Sheet (Optional):	Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250 or Sopralene Flam 250, torch-applied with minimum 3" wide lap.
Membrane:	Elastophene Flam GR, Elastophene Flam LS FR GR, Elastophene Flam FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 GR 3.5, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Soprastar Flam, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, Soprafix Cap FR-651, torch-applied with minimum 3" wide lap.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	-97.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Concrecel Lightweight Concrete, min. 140 psi. cast over deck with 1" EPS board embedded in 1/8" slurry. Followed by 3" top coat of Concrecel Lightweight Concrete.

System Type E(17): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: Minimum 22 ga. type B, Grade 33 vented steel decking washed with a weak acid solution attached to supports spaced 6' o.c. maximum using 5/8" puddle welds spaced 6" o.c. Steel deck side laps are attached with #1/4-14 x 7/8", DP1, HWH self-drilling screws with ¼" washers evenly spaced 12" o.c.

Base Sheet: One layer of Soprafix [S], Soprafix Base 612, Soprafix [F], Soprafix Base 613, Soprafix [X], Soprafix Base 614 fastened to the deck as described below:

Fastening: Attach base sheet using ES Products Low Pro Batten Bar, Trufast #15 EHD Fasteners, Soprema #15 HD Fasteners with spaced 6" o.c. in a 4" lap.

Ply Sheet None

Membrane: Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 GR 3.5, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Soprastar Flam, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied with minimum 3" wide lap.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.

Maximum Design Pressure: -97.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Mearlcrete Lightweight Insulating Concrete, 300 psi. min

System Type E(18): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: Lightweight Concrete shall be cast over the following substrate: Minimum 18 ga., Grade 33, type 3N steel decking attached to minimum ½" thick, W14 x 43 purlins with an 8" wide top flange spaced maximum 9 ft. o.c. using ¾" puddle welds spaced 8" o.c. (every bottom flute). Two welds per attachment point, spaced 4" apart. Steel deck side laps are attached 24" o.c. with Teks1 fasteners. or Structural Concrete deck.

Base Sheet: Soprafix [X], Soprafix Base 614 or Sopralene Flam 250 fastened through the lightweight concrete to the deck using Soprema #15 Fastener or SFS Dekfast #15 HS Fasteners with approved, 70 mm round, plates spaced 16" o.c. in a 5" wide lap and 16" o.c. in one center row. The side lap fastener row is encapsulated in the torched/heat fused lap and the center row is stripped-in with and 8" wide strip of torch-applied membrane.

Ply Sheet: (Optional) Elastophene Flam, Elastophene Flam 2.2, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.

Membrane: Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam FR+GR, Elastophene Flam LS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 GR 3.5, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.

Maximum Design Pressure: -112.5 psf. (See General Limitation #7)

Membrane Type:	SBS
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Celcore MF Cellular Concrete; minimum wet cast density of 38-42 lbs.ft/3, min. 340 psi, over 18-22 ga steel decking or structural concrete deck.
System Type E(19):	Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck:	18-22 ga., Grade 33, steel deck type B, BV attached to supports spaced max. 5' o.c. using ITW Buildex Driller Screw fasteners with nickel plated washers spaced maximum 6" o.c. Steel deck side laps are attached with ITW Buildex Driller Screw fasteners spaced maximum 12" o.c. or structural concrete deck.
LWC Deck:	Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture with a minimum wet cast density of 38-42 lbs./ft^3, filling the corrugation with a minimum depth of 1/8". Minimum 1" thick Insulfoam EPS Holey Boards are then immediately placed in a brick-like pattern into the wet concrete and is allowed to set overnight. The following day, a minimum 2" thick topping layer of Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture is placed atop the EPS at a wet cast density of 38-42 lbs./ft^3.
LWC Deck Preparation:	After an overnight set, Celcore PVA Curing Compound is spray applied to lightweight concrete at a rate of 0.5 gal./sq.
Base Sheet:	One layer of Soprafix [S], Soprafix Base 612, Soprafix [F], Soprafix Base 613, Soprafix [X] or Soprafix Base 614 mechanically attached through LWC into steel decking, perpendicular to the direction of the steel decking with Soprafix MBB-R batten bars and OMG XHD fasteners or Soprema #15 fasteners spaced in the following pattern: 6" x 12" x 6", repeated until end of batten is reached, within a torch-applied minimum 3" side lap and one row in the field of the sheet with Soprafix MBB-R batten bars and OMG XHD Fasteners or Soprema #15 fasteners spaced 12" o.c. Apply a 6" wide strip of Soprafix [S] or Soprafix Base 612 torch-applied over the exposed center row of fasteners.
Ply Sheet (Optional):	Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, torch-applied with minimum 3" wide lap.
Membrane:	Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 GR 3.5, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, Soprafix Cap FR-651, torch-applied with minimum 3" wide lap.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	-150 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Celcore MF Cellular Concrete; min. 40 lbs./ft^3, min. 300 psi, over 18-22 ga steel decking or structural concrete deck.

System Type F(1): Base sheet adhered to substrate.

All General and System Limitations apply.

Structural Deck: 18-22 ga., Grade 33, vented or non-vented, galvanized steel deck installed and welded to minimum 0.25 in. thick steel structural supports spaced maximum 6' o.c. using 3/8" diameter weld washers 6" o.c. at each bearing. The deck side laps are fastened at 24" o.c. (three evenly spaced fasteners between supports) using Teks 1 or Traxx/1 fasteners between supports. or structural concrete deck.

LWC Deck: Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture with a minimum wet cast density of 40 lbs./ft^3, filling the corrugation with a minimum depth of 1/8". The Celcore HS admixture was added to the mixture during the mixing process at a rate of 3.4 fl. oz. per 100 lbs. of cement. Minimum 1" thick Insulfoam EPS Holey Boards are then immediately placed into the wet concrete and allowed to set overnight. The following day, a minimum 2" thick topping layer of Celcore MF Cellular Concrete with Celocre HS Rheology Modifying Admixture is placed atop the EPS at a wet cast density of 42 lbs./ft^3.

LWC Deck Preparation: After an overnight set, Celcore PVA Curing Compound is spray applied to the lightweight concrete at a rate of 0.33 gal./sq.

Primer: Elastocol 500, Elastocol Stick or Elastocol Stick Zero roller applied at a rate of 0.5 gal./sq., to top surface of base or ply sheet prior to application of next layer.

Base Sheet: One layer of Colvent TG,Colvent 180 TG, Colvent Flam TG, Colvent Flam 180 TG, torch-applied with minimum 3" wide lap.

Ply Sheet: None

Membrane: Elastophene Flam GR, Elastophene Flam LS FR GR, Elastophene Flam FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 GR 3.5, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Soprastar Flam, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, Soprafix Cap FR-651, torch-applied with minimum 3" wide lap.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.

Maximum Design Pressure: -45 psf. (See General Limitation #9.)

Membrane Type:	SBS
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Concrecel Lightweight Insulating Concrete, Min. 300 psi, over steel deck treated with Concrecel P-031 and P-032 bonding agent. Minimum 2 ¼" topcoat of Concrecel is cast over a min. 1" thick EPS board (min. 1pcf). or Celcore Cellular Lightweight Insulating Concrete min. 200 psi with a wet cast density of 38 pcf, over concrete deck. . Minimum 2" topcoat of Celcore is cast over a min. 1" thick EPS board (min. 1pcf). After an overnight set, Celcore PVA Curing Compound is spray applied to lightweight concrete at a rate of 0. gal./sq.
System Type F(2):	Base sheet adhered to substrate

All General and System Limitations apply.

Structural Deck:	*(Concrecel only)* Min. 22 ga., Grade 33, non-vented, galvanized (G-90) steel deck secured to structural supports spaced 6' o.c. with 1-1/2" Tex screws and 1-¼" diameter washers at 6" o.c. The deck side laps are fastened at 12" o.c. using 1-1/2" Tex screws. *(Celcore only)* Structural concrete.
Primer:	Elastocol 500, Elastocol Stick, Elastocol Stick Zero applied at a rate of 1 gal./sq., to top surface of base or ply sheet prior to application of next layer
Base Sheet:	One layer of Colvent TG, Colvent 180 TG, Colvent Flam TG*, Colvent Flam 180 TG*, torch-applied. *Requires torch-applied cap membrane.
Ply Sheet:	None
Membrane:	Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Soprastar Flam, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 GR 3.5, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. Or Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Soprastar Sanded, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 180 Ultra FR GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralene 250 Ultra FR GR, adhered in hot asphalt at 25 lbs./sq. to sand surfaced base membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	-60 psf. (See General Limitation #9.)

Membrane Type:	SBS
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Celcore Cellular Lightweight Insulating Concrete, Min. 300 psi, min. wet cast density of 38 lbs./ft^3, over structural concrete deck.
System Type F(3):	Base sheet adhered to substrate

All General and System Limitations apply.

Primer: (Optional)	Primed with an ASTM D41 primer at a rate of ¾ to 1 gal./sq.
LWC Deck:	Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture with a minimum wet cast density of 38 lbs./ft^3, with a minimum depth of 1/8". The Celcore HS admixture was added to the mixture during the mixing process at a rate of 3.4 fl. oz. per 100 lbs. of cement. Minimum 1" thick Holey Boards are then immediately placed into wet LWC and allowed to set overnight. The following day, a minimum 2" thick topping layer of Celcore MF Cellular Concrete with Celocre HS Rheology Modifying Admixture is placed atop the EPS at a wet cast density of 38 lbs./ft^3.
LWC Deck Preparation:	After an overnight set, Celcore PVA Curing Compound is spray applied to the lightweight concrete at a rate of 0.33 gal./sq.
Base Sheet:	One layer of Colvent TG, Colvent 180 TG, Colvent Flam TG, Colvent Flam 180 TG, torch-applied to primed lightweight concrete.
Ply Sheet:	Elastophene Flam, Elastophene Flam 2.2, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene Flam 250, torch-applied.
Membrane:	Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Soprastar Flam, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	-187.5 psf. (See General Limitation #9.) -410 psf. with primed concrete substrate. (See General Limitation #9.)

Membrane Type:	SBS
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Celcore Cellular Lightweight Insulating Concrete, min. wet cast density of 38 lbs./ft^3, min. 300 psi over structural concrete deck.
System Type F(4):	Base sheet adhered to substrate

All General and System Limitations apply.

Vapor Barrier: (Optional)	Elastophene SP 2.2, Colphene SP 2.2, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.
LWC Deck:	Celcore HS Cellular Concrete with a minimum wet cast density of 38 lbs./ft^3, with a minimum depth of 1/8". Minimum 1" thick EPS Holey Board placed into wet LWC. The following day a minimum 2" thick top of Celcore HS Cellular Concrete is placed atop the EPS at a wet cast density of 38 lbs./ft^3.
LWC Deck Preparation:	After an overnight set, Celcore PVA Curing Compound is spray applied to the lightweight concrete at a rate of 0.33 gal./sq.
Primer:	Substrate shall be primed with ASTM D41 primer prior to the application of base sheet.
Base Sheet:	Elastophene SP 2.2, Colphene SP 2.2, Elastophene Flam, Elastophene Flam 2.2, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0 or Sopralene 250 SP, torch-applied.
Membrane:	Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 GR 3.5, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied with minimum 3" wide laps.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	-255 psf. (See General Limitation #9.) -360 psf. with vapor barrier (See General Limitation #9.)

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Celcore Cellular Lightweight Insulating Concrete, Min. 300 psi over structural concrete deck.

System Type F(5): Base sheet adhered to substrate

All General and System Limitations apply.

Primer: Structural concrete deck primed with ASTM D41 primer.

Vapor Barrier: (Optional) One layer of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Soprafix, Soprafix Base 622 or Sopralene 250 SP, torch-applied.

Or

One layer of Elastophene Sanded, Colphene Sanded, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or in FM Adhesive, COLPLY Adhesive, COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square.

LWC Deck: Celcore HS Cellular Concrete with a minimum wet cast density of 38 lbs./ft^3, with a minimum depth of 1/8". Minimum 1" thick EPS Holey Board placed into wet LWC. The following day a minimum 2" thick top of Celcore HS Cellular Concrete is placed atop the EPS at a wet cast density of 38 lbs./ft^3.

LWC Deck Preparation: After an overnight set, Celcore PVA Curing Compound is spray applied to the lightweight concrete at a rate of 0.33 gal./sq.

Primer: (Optional) ASTM D 41, Elastocol 500, Elastocol Stick, Elastocol Stick Zero applied at a rate of 1 gal./sq., to top surface of any base or ply sheet prior to application of next layer.

Base Sheet: One layer of Colvent TG, Colvent 180 TG, Colvent Flam TG*, Colvent Flam 180 TG*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene Flam*, Elastophene Flam 2.2*, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, torch-applied to primed lightweight concrete.
*Requires torch-applied ply or cap membrane.

Ply Sheet: (Optional) One or more layers of Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250* or Sopralene 250 SP, torch-applied.

Or

One or more layers of Sopralene 180 Sanded, Sopralene 180 PS* or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. to sand surfaced base membrane.
*Requires torch-applied cap membrane.

Membrane:	Soprastar Flam, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 Ultra FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 Ultra FR GR, Sopralene Flam 250 FR+ GR, Sopralene Flam Antirock, torch-applied.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	-262.5 psf. (See General Limitation #9.)

LIGHTWEIGHT INSULATING CONCRETE SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117; calculations shall be signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant.
2. For steel deck application where specific deck construction is not referenced: The deck shall be a minimum 22 gage attached with 5/8" puddle welds with weld washers at every flute with maximum deck spans of 5 ft. o.c.
3. For systems where specific lightweight insulating concrete is not referenced, the minimum design mix shall be a minimum of 300 psi.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.
   Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. Insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant
   (When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners).
   (When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE